HUNGARY/Nuclear Physics - Installations and Instruments. Methods of Measurement and Research C

Abs Jour : Ref Zhur Fizika, No 8, 1959, 17148

Author : Kantor, Karoly; Zsdanszky, Kalman
Inst :
Title : Automatic Cloud Chamber for the Investigation of Cosmic Rays

Orig Pub : Magyar fiz. folyoirat, 1958, 6, No 3, 191-208

Abstract : A thorough study is made of problems of the construction, preparation, and adjustment of an automatic cloud chamber, controlled by Geiger-Muller counters. The separate units of the chamber and the control circuits are described.

Card 1/1

KANTOR, K.

SCIENCE

Periodicals MAGYAR FIZIKAI FOLYOIRAT. Vol. 6, no. 4, 1958

KANTOR, K. A simpleelectromagnetic liquid faucet applicable in a pipe system with 0-4 atmospheric pressure. p. 373.

Monthly List of East European Accessions (EEAI) LC. Vol. 8, No. 5, May 1959, Unclass.

KANTOR, K.; GEMESY, T.

Stereochart comparison unit. p.139

MAGYAR FIZIDAI FOLYOIRAT. Budapest, Hungary. Vol. 7, No. 2, 1959

Monthly List of East European Accessions (EEAI), LC. Vol. 8, No. 9, September 1959
Uncl.

BAKOS, Jozsef; KANTOR, Karoly

Light diffraction of slits for extended light sources. Koz fiz kozl MTA 8 no.2/3:131-144 '60. (EEAI 10:4)

1. Magyar Tudomanyos Akademia Kozponti Fizikai Kutato Intezete. (Light)

BAKOS, Jozsef; KANTOR, Karoly; VARGA, Peter

Interference in the Michelson's interferometer in case of extended light sources. Koz fiz kozl MTA 9 no.4:207-226 '61.

BAKOS, Jozsef; KANTOR, Karoly

Spatial dostribution of the visibility of the interference picture in Michelson's interferometer. Koz fiz kozl MTA 9 no. 3:129-140 '61.

1. Fizikai Optikai Laboratorium.

BAKOS, Jozsef; ERKOKURTI, Zoltan; KANTOR, Karoly

Laboratory mechanical unit system in special regard to optical and semi-automatic measurements. Koz fiz kozl MTA 9 no.3:171-180 '61.

1. Fizikai Optikai Laboratorium.

BAKOS, Jozsef; KANTOR, Karoly; VARGA, Peter

Interference in the Michelson's interferometer in case of extended light sources. Kos fiz kozl MTA 9 no.4:207-226 '61.

S/058/63/000/001/063/120
A160/A101

AUTHORS: Bakos, József, Kántor, Károly, Náray, Zsolt

TITLE: The interference between series of wave trains obtained by the method of series amplitude fission

PERIODICAL: Referativnyy zhurnal, Fizika, no. 1, 1963, 65, abstract 1D461 ("Magyar tud. akad. Közp. fiz. kutató int. közl.", no. 5 - 6, 1961, 9, 307 - 316, IV, X, Hungarian; summaries in Russian and English)

TEXT: By means of amplitude fission, for instance, with the help of a plane-parallel plate, the given train of waves may be transformed into a series of coherent wave trains. The interference of such series is studied, and an investigation of the possibility of using this method is carried out.

[Abstracter's note: Complete translation]

Card 1/1

ERDOKURTI, Zoltan; KANTOR, Karoly

The order and visibility of interference in the Michelson interferometers in case of rectangular centered light sources. Koz fiz kozl MTA. 11 no.2:99-116 '63.

ERDOKURTI, Zoltan; KANTOR, Karoly

Visibility and order of interference in the Michelson interferometers in case of excentric light sources. Koz fiz kozl MTA 11 no.2:117-125 '63.

ERDOKURTI, Zoltan; KANTOR, Karoly

Accuracy testing of mechanical building block elements.
Koz fiz kozl MTA 11 no.6:475-478 '63.

ERDOKURTI, Zoltan; KANTOR, Karoly

The ordinal of interference in the Michelso- interferometer in case of circular, centered light sources. Kcz fiz kozl MTA 10 no.4:269-288 '62.

KANTOR, L.

Possibilities of Increasing Capacity and Making Better Use of Existing Capacity in the Haberdashery Industry." p. 352 (Magyar Textiltechnika. No. 11/12, Nov../Dec, 1953 Budapest,)

Vol. 3, no. 6
SO: Monthly List of East European Accessions,/Library of Congress, June 1954, Uncl.

KANTOR, L., kand.tekhn.nauk

Reception of three wire broadcast programs. Radio no.4:18-20 Ap '61. (MIRA 14:7)

(Wire broadcasting)

KANTOR, Laszlo, dr.; VARGA, Karoly, dr.

Hygienic aspects of the amelioration of health conditions in a village. Nepegeszseguy 36 no.6:146-149 June 55.

(PUBLIC HEALTH
in Hungary, hygienic aspects in villages.)
(SANITATION
in Hungary, in village planning.)
(RURAL CONDITIONS
in Hungary, sanitation in village planning.)

KANTOR, L.

"The significance of a preventive control in factories for the protection of the workers' health." p. 102 (NEPEGESZSEGUGY, Vol. 34, no. 4 April, 1953, Budapest.)

SO: Monthly List of East European Accessions, Vol. 2 #8, Library of Congress, Aug. 1953, Uncl.

KANTOR, L.

Several problems in the theory of amortization. Fin.SSSR 21 no.5:21-27 My '60. (MIRA 13:7)
(Amortization)

KANTOR, L., kand.tekhn.nauk

Reception of wire broadcasting programs using a broadcast receiver. Radio no.11:27-29 N '62. (MIRA 15:12)
(Wire broadcasting)
(Radio)

KANTOR, Laszlo

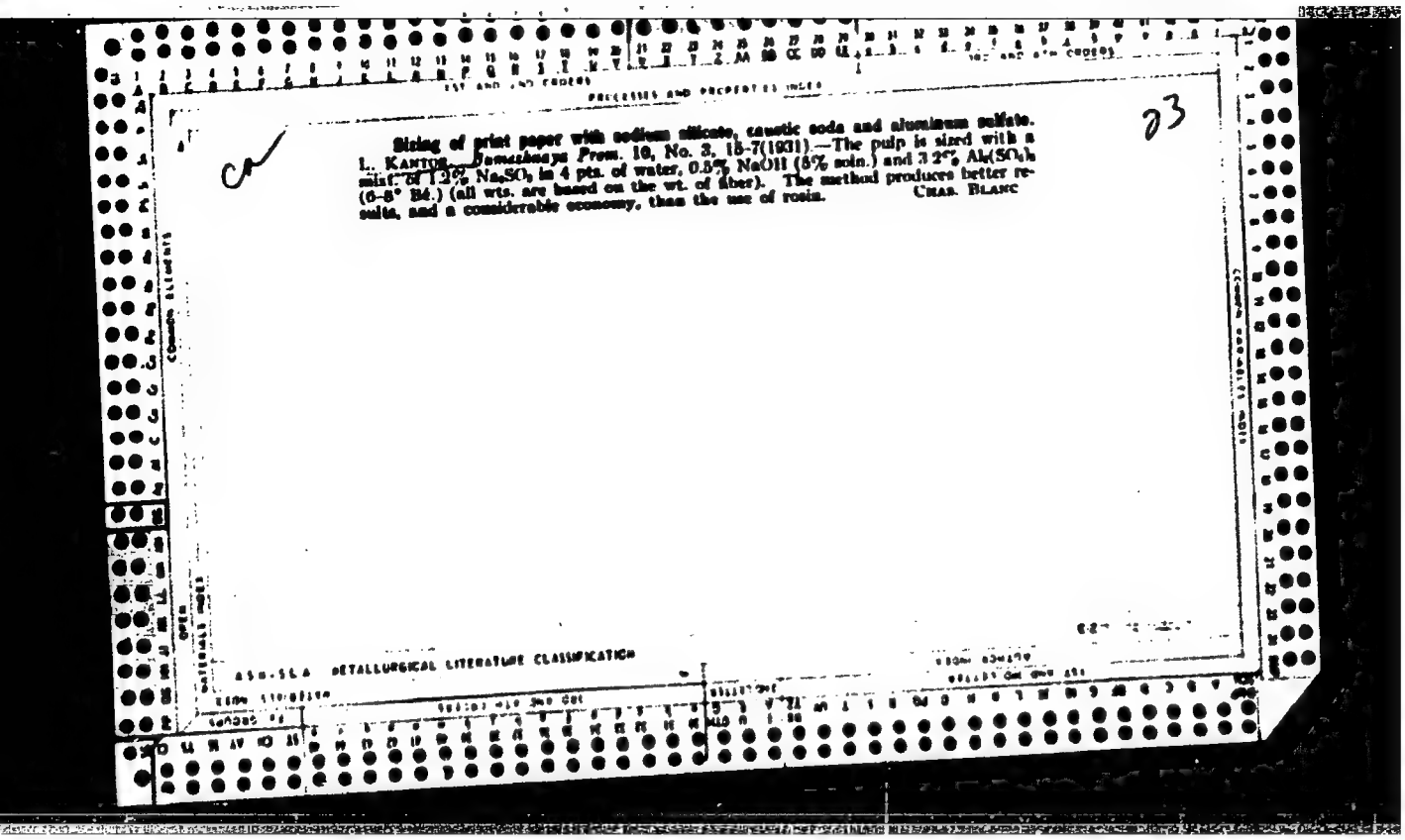
New trends in textile manufacture without weaving. Magy textil lap no.10:470-472 O '62.

KANTOR, Laszlo

Manufacture of unwoven textiles in Hungary. Magy textil 16 no. 5:207-210 My '64.

KANTOR, Laszlo

The 4th Hannover Exhibition of Textile Machines from the point of view of the smallware industry. Magy textil 16 no.7:328-329 Jl '64.

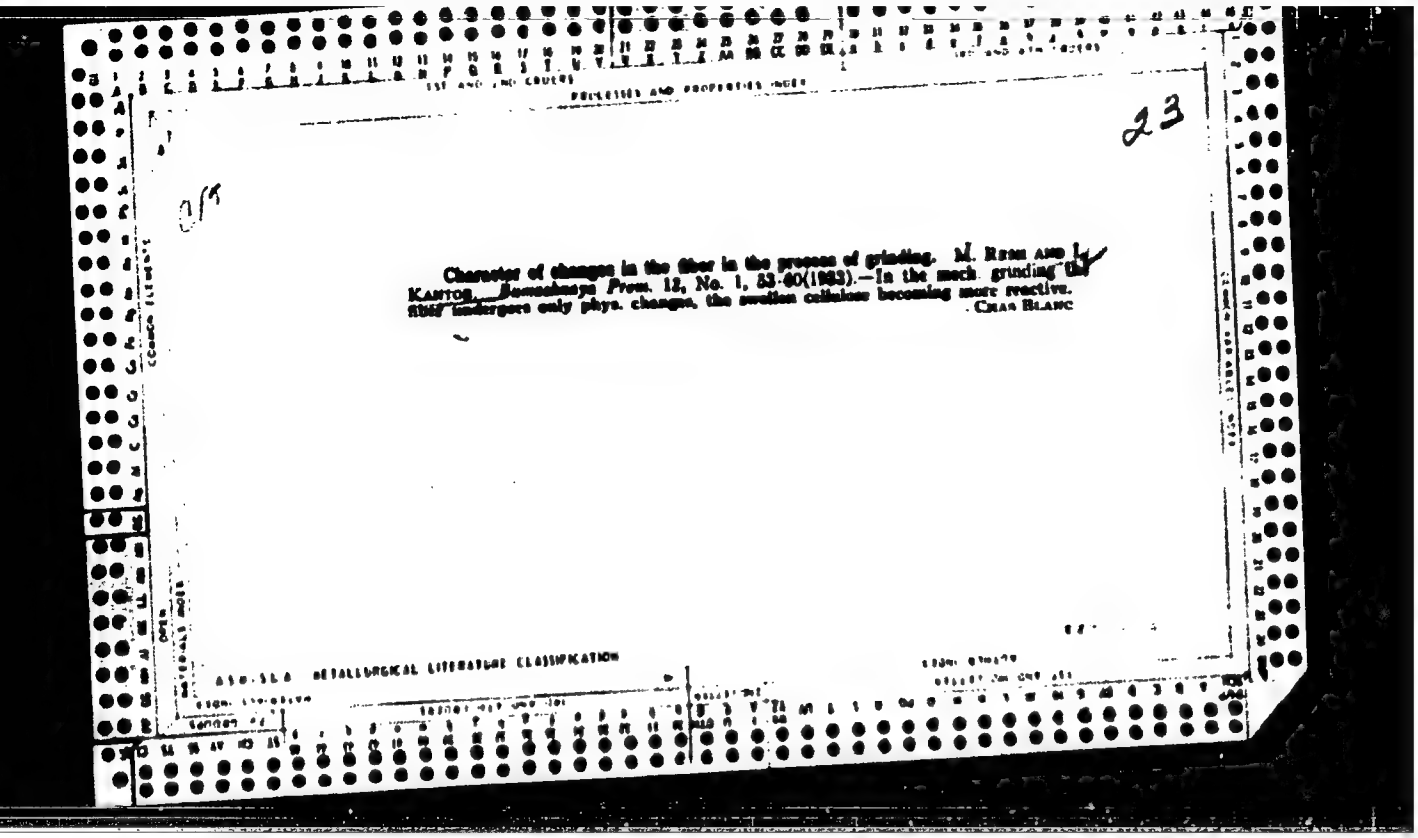


Sizing of print paper with sodium silicate, caustic soda and aluminum sulfate. L. KANTOR. *Zumstoffe u. Papier* 10, No. 3, 15-7(1931).—The pulp is sized with a mixt. of 1.2% Na_2SO_4 in 4 pts. of water, 0.5% NaOH (5% soln.) and 3.2% $Al_2(SO_4)_3$ (0–5° Bé.) (all wts. are based on the wt. of fiber). The method produces better results, and a considerable economy, than the use of rosin. CHAS. BLANC

PROCESSES AND PROPERTIES INDEX

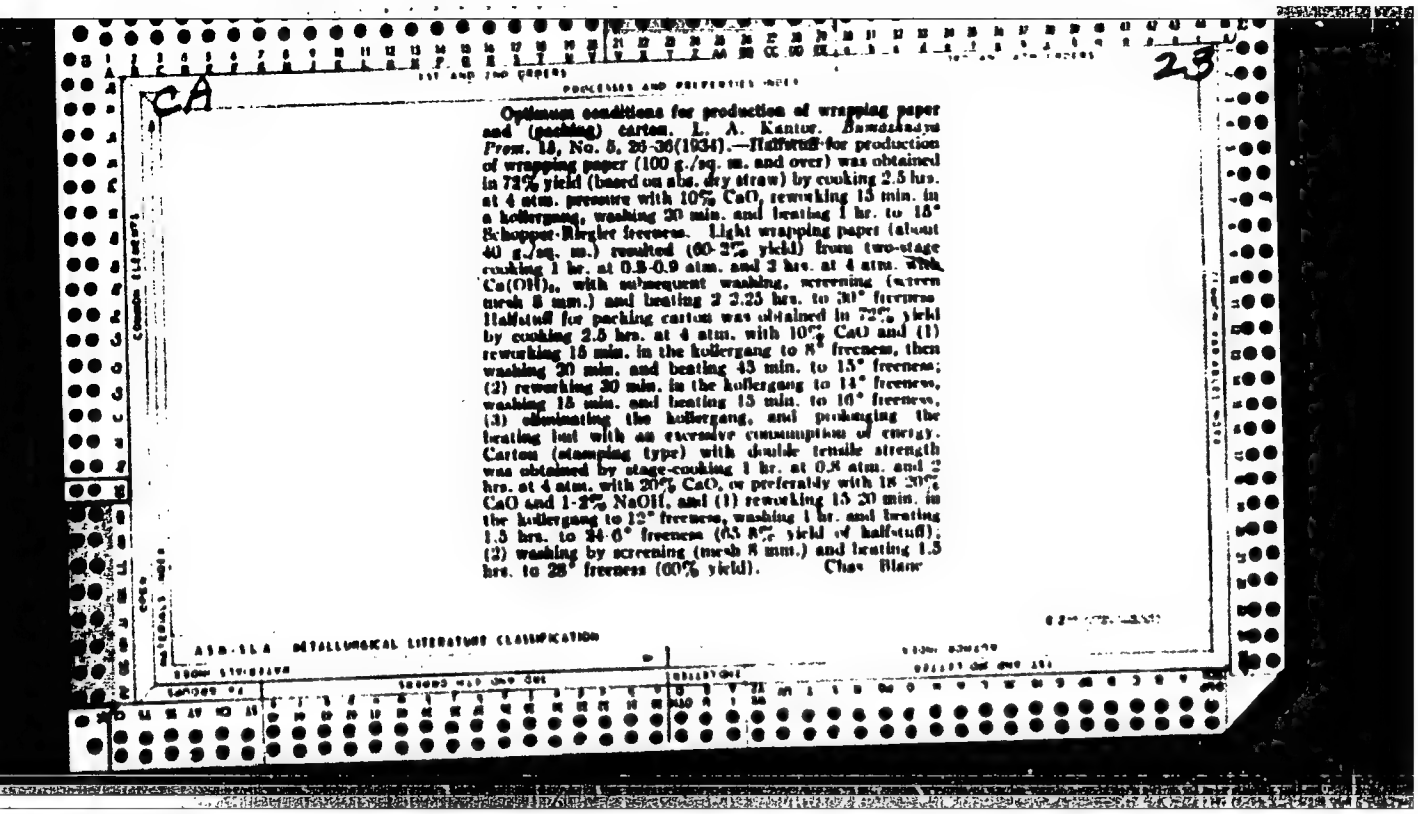
(Wood-pulp) condenser paper. M. P. Resh and L. Aeronov. Tsentral. Nauch.-Issledovatel. Inst. Bumazhnoi Prom. Materialy (Central Sci. Research Inst. Paper Ind. Trans.) 1933, No. 4, 141-84.—Methods of mech. processing and phys. and elec. properties of condenser paper obtained from mixts. of wood and straw pulp with rag pulp are described. Economy of production of condenser paper from (wood) pulp. S. Khvatt. Ibid. 154-68.—A discussion. Chas. Blanc

ASB-SLA METALLURGICAL LITERATURE CLASSIFICATION



23

Character of changes in the fiber in the process of grinding. M. Reiss and I. Kantor. *Bumazhnaya Prom.* 12, No. 1, 53-60(1933).—In the mech. grinding the fiber undergoes only phys. changes, the swollen cellulose becoming more reactive. Chas Blanc



CA

23

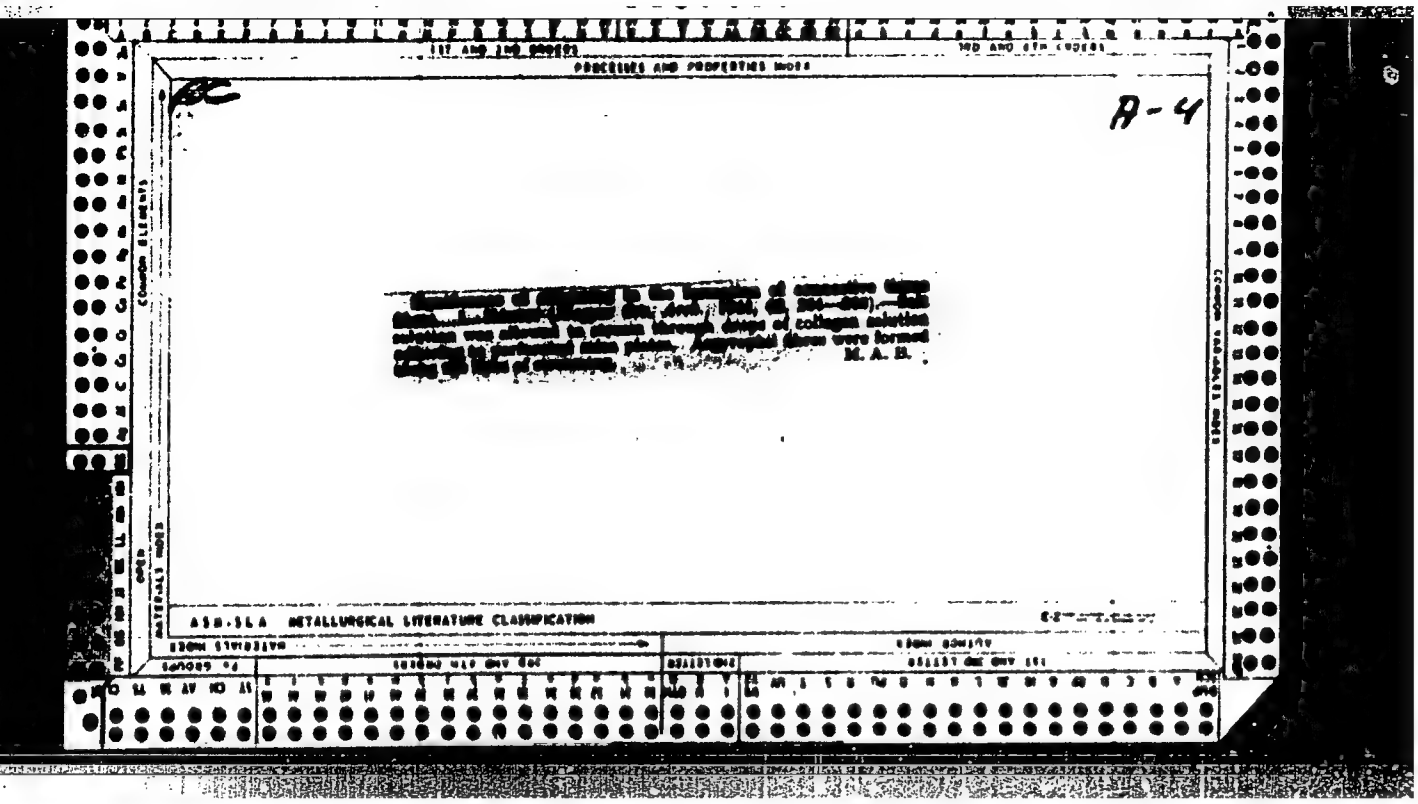
Optimum conditions for production of wrapping paper and (packing) carton. L. A. Kantor. *Bumazhnaya Prom.* 13, No. 5, 26-36(1934).—Halfstuff for production of wrapping paper (100 g./sq. m. and over) was obtained in 73% yield (based on abs. dry straw) by cooking 2.5 hrs. at 4 atm. pressure with 10% CaO, rewetting 15 min. in a hollergang, washing 20 min. and beating 1 hr. to 18° Schopper-Riegler freeness. Light wrapping paper (about 40 g./sq. m.) resulted (60-2% yield) from two-stage cooking 1 hr. at 0.8-0.9 atm. and 3 hrs. at 4 atm. with $Ca(OH)_2$, with subsequent washing, screening (screen mesh 8 mm.) and beating 2 2.25 hrs. to 30° freeness. Halfstuff for packing carton was obtained in 72% yield by cooking 2.5 hrs. at 4 atm. with 10% CaO and (1) rewetting 15 min. in the hollergang to 8° freeness, then washing 20 min. and beating 45 min. to 15° freeness; (2) rewetting 30 min. in the hollergang to 14° freeness, washing 15 min. and beating 15 min. to 16° freeness, (3) eliminating the hollergang, and prolonging the beating but with an excessive consumption of energy. Carton (stamping type) with double tensile strength was obtained by stage-cooking 1 hr. at 0.8 atm. and 2 hrs. at 4 atm. with 20% CaO, or preferably with 18-20% CaO and 1-2% NaOH, and (1) rewetting 15-20 min. in the hollergang to 12° freeness, washing 1 hr. and beating 1.5 hrs. to 24-6° freeness (65-8% yield of halfstuff), (2) washing by screening (mesh 8 mm.) and beating 1.5 hrs. to 28° freeness (60% yield). Chas Blanc

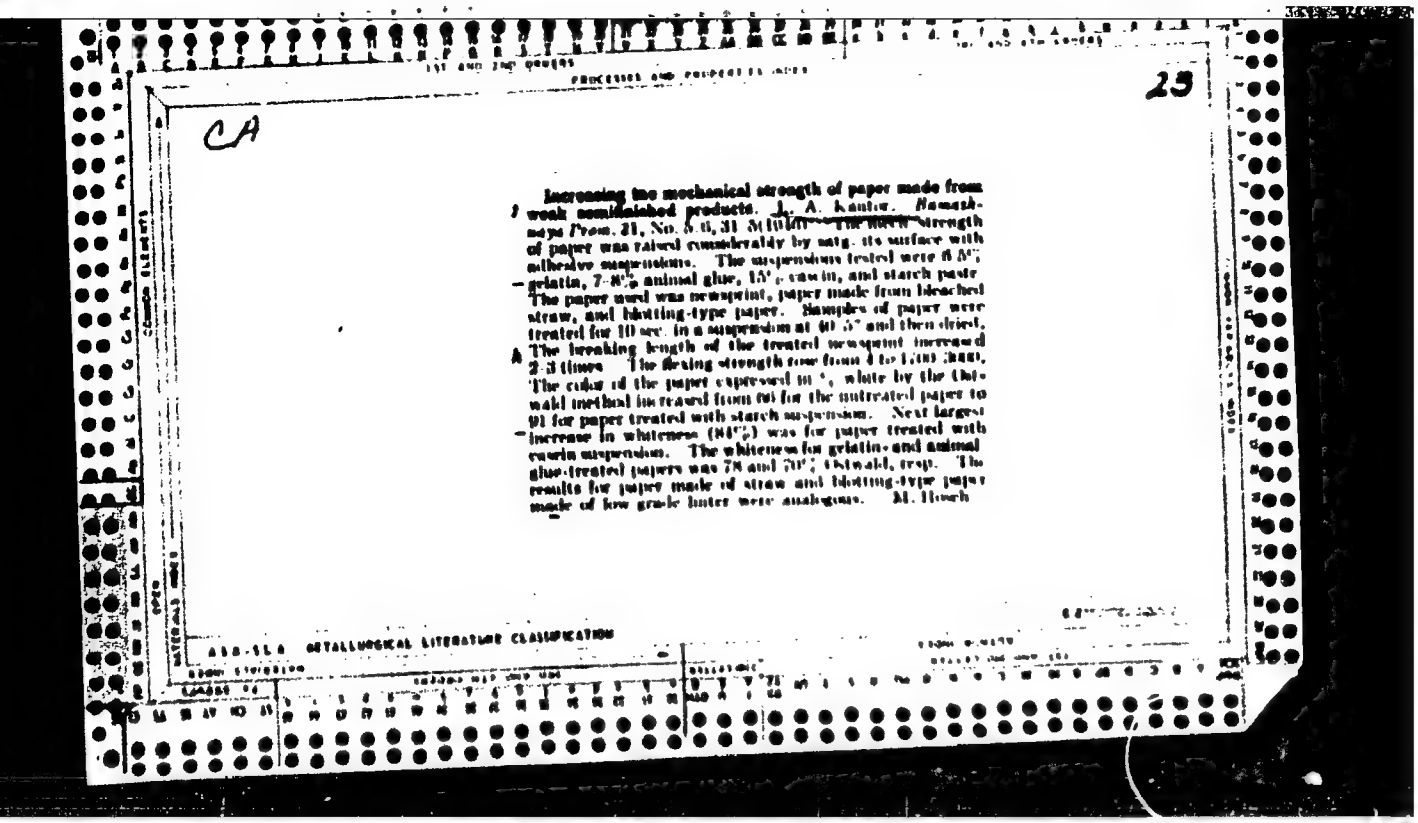
ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

23

Refinement of the process of reworking of (cellular) materials for the production of cigaret, transfer and condenser papers. L. A. Kagan and S. M. Ikhel'son. *Tsentral. Nauch.-Issledovatel. Inst. Bumazhnoi Prom. Materialy* 1936, No. 1, 180-91; cf. *C. A.* 30, 7008.—By a series of mech. operations, previously described, the chaff contents of flax tows were reduced from 30 and 26-34% to 8-9 and 5.5-6%, resp., with 46 and 61% yields of fiber. The products with 8-9% chaff cooked with 10% CaO and 5% NaOH at 4 atm. for 9 hrs., followed by washing, beating to 26-8° freeness and bleaching with a consumption of 3.5-4% of active Cl, gave an entirely white, chaff-free halfstuff suitable for the production of cigaret and transfer papers of the standard grade but with considerably higher mech. properties. The products with a max. of 5.5-6% chaff when treated as above resulted in a halfstuff and a white, chaff-free condenser paper with satisfactory elec. and mech. properties. Bleaching of halfstuff with 4% Cl for more than 4-5 hrs. results in porous and perforated condenser paper. Chas. Blanc

METALLURGICAL LITERATURE CLASSIFICATION

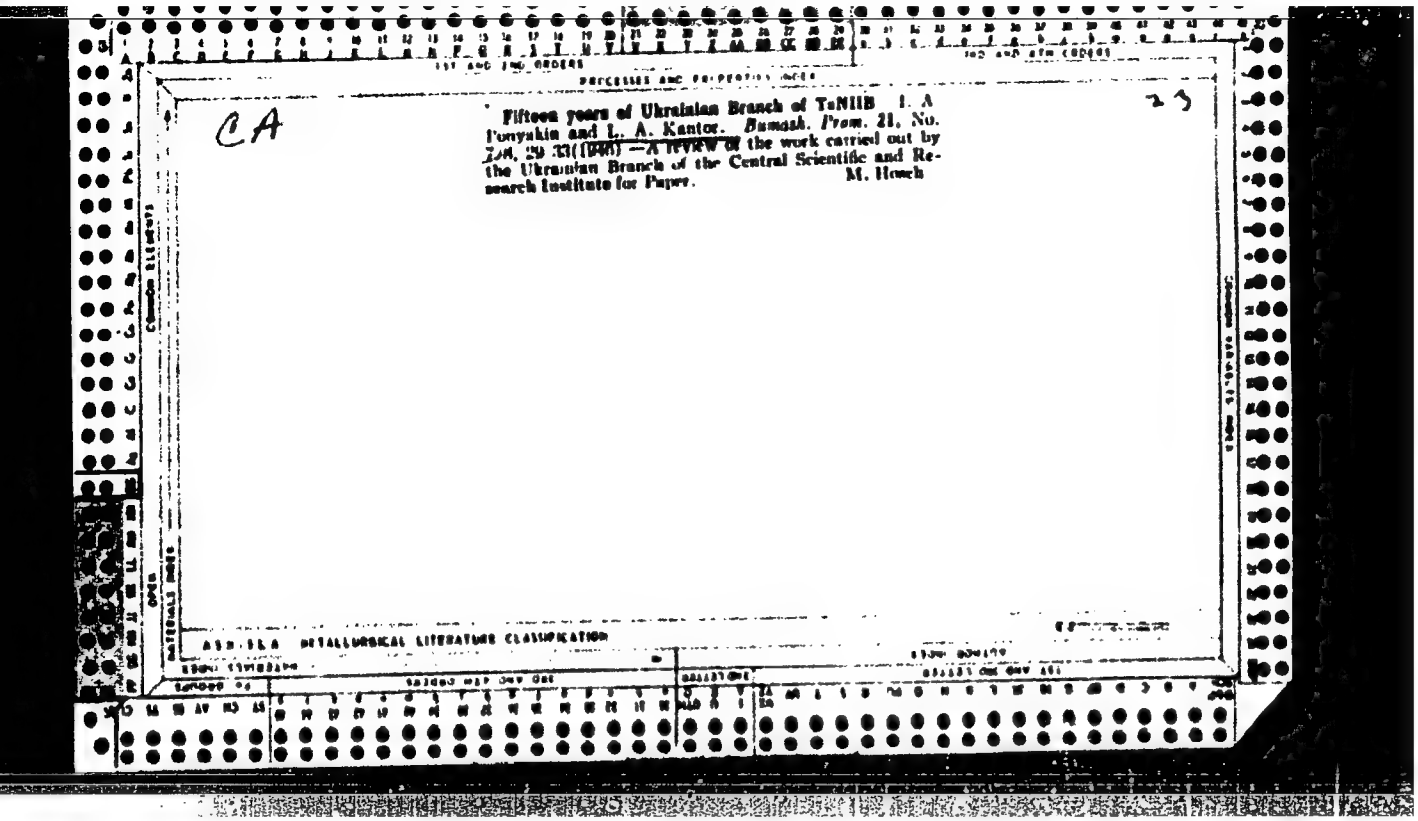




CA

23

Increasing the mechanical strength of paper made from weak semifinished products. L. A. Kantor. *Bumazh-naya Prom.* 21, No. 5-6, 31-5(1946).—The mech. strength of paper was raised considerably by satg. its surface with adhesive suspensions. The suspensions tested were 6-8% gelatin, 7-8% animal glue, 15% casein, and starch paste. The paper used was newsprint, paper made from bleached straw, and blotting-type paper. Samples of paper were treated for 10 sec. in a suspension at 40-5° and then dried. The breaking length of the treated newsprint increased 2-3 times. The tearing strength rose from 4 to 1,100 mm. The color of the paper expressed in % white by the Ostwald method increased from 60 for the untreated paper to 91 for paper treated with starch suspension. Next largest increase in whiteness (84%) was for paper treated with casein suspension. The whiteness for gelatin- and animal glue-treated papers was 78 and 70%, Ostwald, resp. The results for paper made of straw and blotting-type paper made of low grade linter were analogous. M. Hoch



CA

Fifteen years of Ukrainian Branch of TsNIIB I. A Povyshin and L. A. Kantor. *Bumazh. Prom.* 21, No. 7-8, 29-33 (1946) —A review of the work carried out by the Ukrainian Branch of the Central Scientific and Research Institute for Paper. M. Hesch

1. KANTOR, L. A.

2. USSR (600)

4. Paper Industry

7. Producing highly absorbent, mechanically tough paper. Bum. prom. 27, No. 5, 1952

9. Monthly List of Russian Accessions, Library of Congress, February 1953. Unclassified.

KANTOR, L.A., kandidat tekhnicheskikh nauk.

Production of half stuff from rags. Bum.prom. 22 no.9:19-21 S '53.
(MLRA 6:8)
(Rags)

Kantor, L. A.

New methods for the production of rag fiber. Tr. from the Russian. p. 202. PAPIR A CELULOSA. (Ministerstvo lesu a drevarskeho prumyslu) Praha. Vol. 9, no. 9, Sept. 1954.

SOURCE: EEAL - LC Vol. 5 No. 10 Oct. 1956

KANTOR, L.A., kandidat tekhnicheskikh nauk.

Production of newsprint with low weight per square meter. Bum.prom. 30 no.3:11-13 Mr '55. (MIRA 8:4)
(Newsprint)

KANTOR, L.A., kandidat tekhnicheskikh nauk

The use of carboxymethyl wood pulp in the paper industry. Bum. prom. 30 no.6:12-14 Je '55. (MLRA 8:9)
(Paper industry) (Cellulose)

KANTOR, L.A., kandidat tekhnicheskikh nauk.

Elasticity in paper; letter to the editor. Bum.prom.31 no.8:15 Ag '56. (Newsprint--Testing) (MLRA 9:10)

KANTOR, L.A.

Simplified technology of producing rag semipulp. Bum.prom.31 no.12: 20-21 D '56. (MLRA 10:2)

1. Ukrainskiy nauchno-issledovatel'skiy institut bumagi.
(Woodpulp industry) (Rags)

KANTOR, L.A., kand.tekhn.nauk; KEMPEL', TS.Ye., inzh.

Disinfection of waste paper. Bum.prom. 34 no.9:12 S '59.
(MIRA 13:2)

1. Ukrainskiy nauchno-issledovatel'skiy institut tsellyuloznoy i bumazhnoy promyshlennosti.
(Paper--Disinfection)

KANTOR, L.A., kand.tekhn.nauk; KOZINA, S.M.

Simplified method of manufacturing a moisture-resistant paper twine. Bum.prom. 34 no.7:12-13 Jl '59. (MIRA 12:10)

1. Ukrainskiy nauchno-issledovatel'skiy institut tsellyulosnoy i bumazhnoy promyshlennosti.
(Paper) (Twine)

KANTOR, L.A., inzh.; MEYERSON, V.D., inzh.

Automatic distribution device of compressed air of high pressure. Khim. i neft. mashinostr. no.6:34-35 D '64
(MIRA 18:2)

USSR.

The effect of denervation on the glycolytic processes of muscles. S. E. Epel'baum and L. F. Kantor (Med. Inst. Molotov). *Biokhimiya* 19, [illegible].—Denervation was accomplished by excising a part of the sciatic nerve and by cutting the Achilles tendon of the leg of a rabbit. The fat and connective tissue of the denervated muscles were removed. At various time intervals the rabbits were decapitated and the muscles removed rapidly from the operated and normal (control) legs. Glycolytic and aldolase activities of the muscles were detd. by methods briefly described. Muscle denervation results in the lowering of its glycolytic activity; 30-35 days after operation the muscle loses its power to use glycogen as well as its ability to convert glucose to lactic acid; 20-25 days following denervation, the aldolase activity of the muscle is lowered 72.6-89.3%. In tenotomy the aldolase activity of the muscle remains practically unchanged, despite its loss in weight.

D. S. Levine

Chem of Biochemistry

KANTOR, L.F.

Effect of the denervation on the glycogen, ATP and phosphocreatine content of muscles in experimental hypothyroidism. Vop. med. khim. 6 no. 6:619-624 N-D '60. (MIRA 14:4)

1. Chair of Biochemistry, Medical Institute, Perm.
(MUSCLES) (GLYCOGEN) (ADENOSINE TRIPHOSPHATE)
(COENZYMES) (URACIL)

KANTOR, L.I.; MALYSHEV, V.G.

Machine for digging foundation pits for catenary poles.
Biul.tekh.-ekon.inform. no.7:56-59 '60.
(MIRA 13:7)

(Excavating machinery)

KANTOR, L.L.

Spectrum analysis of gases by means of photoelectric registration of spectra. Sbor. mat. po vak. tekh. no.24:74-83 '60. (MIRA 14:2)

(Gas tubes) (Mass spectrometry)

*
Kantor, Lazar' Moiseyevich

Organizatsiya vnutrizavodskogo khozrascheta [Organization of intra-factory cost-accounting] Moskva, Gosplanizdat, 1950.

102 p. tables.

KANTOR, L.

Overhead expenses in socialist industry. Fin. SSSR 16 no.7: 22-31 Jl'55. (MLRA 8:10)
(Industrial management)

LEVIN, Mikhail Israilevich; KANTOR, L.M., kandidat ekonomicheskikh nauk, nauchnyy redaktor.

Major construction work. Ekon.prom.pred.no.5:10 '56. (MLRA 10:3)
(Bibliography--Construction industry)

KAFTOR, I.

Some problems in planning wholesale prices. Fin.USSR 17 no.5:31-41 My '56. (MLRA 9:8)

(Prices)

KANTOR, L.

Determination of production costs in mixed operations.
Bukhg.uchet. 14 [i.e. 16] no.8:6-11 Ag '57. (MLRA 10:8)
(Costs, Industrial)

KANTOR, Lazar' Moiseyevich; TYAGAY, Ye., red.; PIOTROVICH, M., tekhn.red.

[Cost in socialist industry] Sebestoimost' v sotsialisticheskoi promyshlennosti. Moskva, Gos. izd-vo polit. lit-ry, 1958. 274 p.
(Costs, Industrial) (MIRA 11:5)

KANTOR, L.M.

[illegible], Sergey Fedorovich, dotsent, kand.ekon.nauk; [illegible], Iosif [illegible]'ovich, dotsent, kand.ekon.nauk; [illegible], Yuriy Fedorovich, starshiy prepodavatel'; [illegible], Yu.I., prof., doktor ekon.nauk, retsenzent; [illegible], A.A., starshiy prepodavatel', retsenzent; [illegible], A.K., dotsent, kand.tekhn.nauk, retsenzent; [illegible], V.E., inzh., retsenzent; [illegible], Yu.A., obshchiy red.; V redaktirovanii prinimali uchastiye: [illegible], E.K., dotsent, red.; [illegible], V.Kh., inzh., red.; [illegible], A.Ye., inzh., red.; [illegible], G.I., starshiy nauchnyy sotrudnik, red.; [illegible], V.G., dotsent, kand.ekon.nauk, red.; [illegible], Ye.A., inzh., red.; [illegible], G.G., inzh., red.; [illegible], M.A., inzh., red.; [illegible], A.K., dotsent, kand.ekon.nauk, red.; [illegible], V.P., inzh., red.; [illegible], K.B., red.; [illegible], Ye.F., red.izd-va; [illegible], M.A., tekhn.red.

(Economics of water transportation) Ekonomika morskogo transporta. Pod obshchei red. I.F.Kolotushkina. Moskva, Izd-vo "Morskoi transport", 1959. 395 p. (MIRA 13:1)

(Shipping--Finance)

KANTOR L.

May 52

USSR/Electronics - Amplifiers
Vacuum Tubes

"More About Converting the UV-1 and UB-1 Amplifiers to 6F5, 6C5, and 6F6S Tubes," L. Kantor

"Radio" No 5, p 22

In the method for converting the UB-1 and UV-1 amplifiers to different tubes suggested in "Radio", No 10, 1950, only a carbon microphone can be used with amplifiers. Suggests a number of changes to improve amplifier sensitivity and permit operation with dynamic microphones.

KANTOR, L., (Moscow)

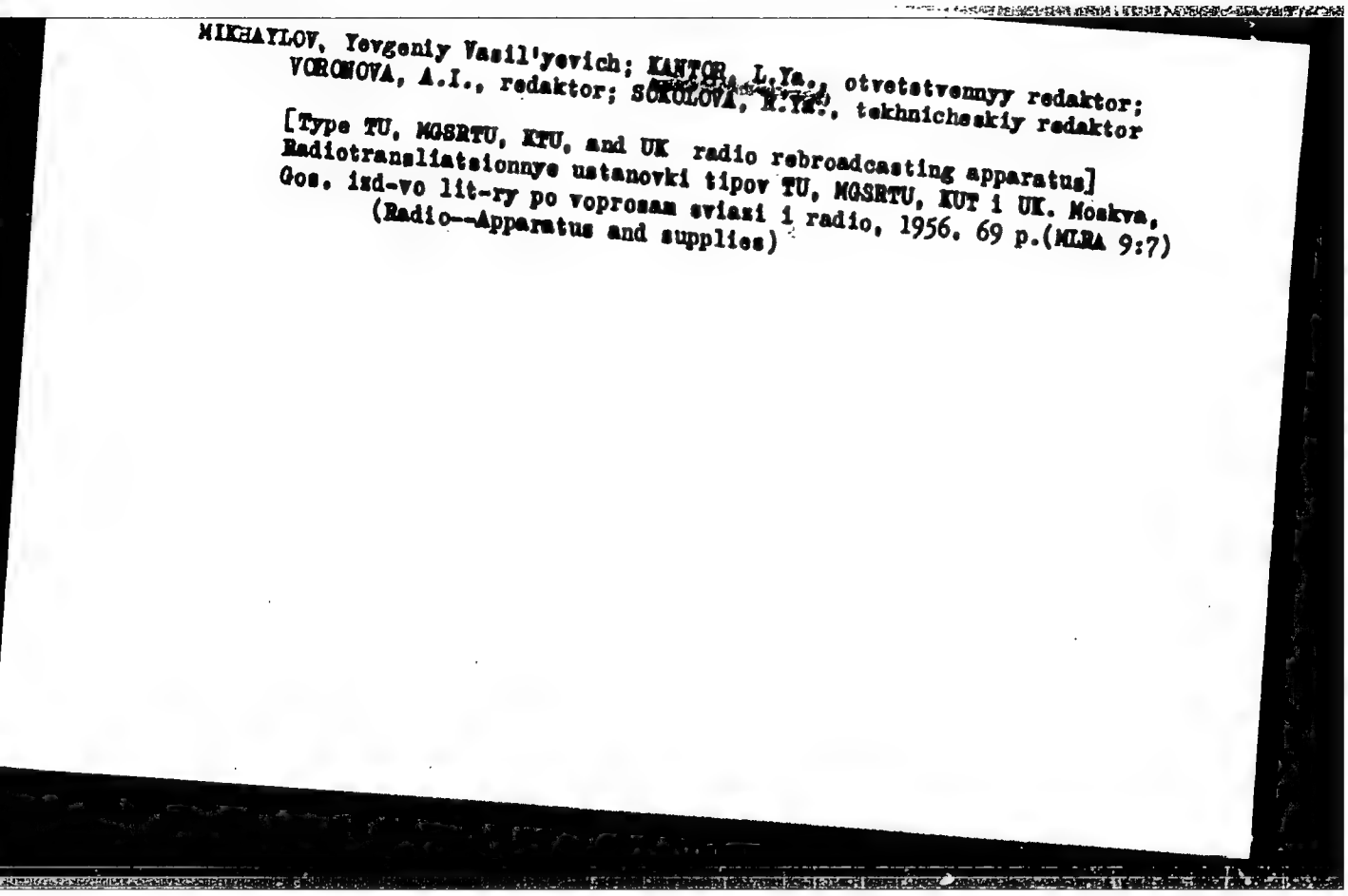
USSR/Electronics - Radio Receivers Oct 53
Distortion

"Improving the PTS-47 Receiver," L. Kantor, Moscow

Radio, No 10, pp 32-34

Gives schematic diagram of detector circuit used in PTS-47 since 1951 and discusses changes to decrease non-linear distortion. Harmonic coeff becomes 4-6% when modulation factor is up to 100%. Sensitivity decreases as much as 40 to 80 μv, and noise level decreases. A Narrow pass band in the low freq portion of the 6-7 kc band is still a defect.

276T86



MIKHAYLOV, Yevgeniy Vasil'yevich; KANTOR, L.Ya., otvetstvennyy redaktor; VORONOVA, A.I., redaktor; SOKOLOVA, M.Ya., tekhnicheskiy redaktor

[Type TU, MGSRTU, KTU, and UK radio rebroadcasting apparatus] Radiotransliatsionnye ustanovki tipov TU, MGSRTU, KUT i UK. Moskva, Gos. izd-vo lit-ry po voprosam sviazi i radio, 1956. 69 p.(MLRA 9:7) (Radio--Apparatus and supplies)

KANTOR, L.

Reducing nonlinear distortion in the "PTS-47" receiver. Radio no.1:22 Ja '56. (MLRA 9:4)

1.Moskovskaya oblastnaya DRTS.
(Radio--Receivers and reception)

KANTOR, Lev Yakovlevich; LEVINA, I.I., otvetstvennyy redaktor; NOVIKOVA, Ye.S., redaktor; BERESLAVSKAYA, L. Sh., tekhnicheskiy redaktor.

[Measurements and adjustments of radio reception and rediffusion centers] Izmereniia i nastroika radiouzlov; opyt raboty proizvodstvennoi laboratorii DRTS. Moskva, Gos.izd-vo lit-ry po voprosam sviazi i radio. 1957. 71 p. (MLRA 10:4)
(Radio measurements)

AUTHOR: Kantor, L.Ya.

267

TITLE: Choice of interstage coupling in FM receivers.(Vybor skhemy mezhkaskadnoy svyazi v priyemnikakh s chastotnoy modulyatsiyey).

PERIODICAL: "Elektrosvyaz'" (Telecommunications), 1957, No.4, April, pp. 29-32 (U.S.S.R.)

ABSTRACT: While in AM receivers the interstage coupling networks are uniquely defined by the degree of their approximation to the filters with a rectangular frequency response (ideal characteristic),the problem becomes more complicated in FM reception. In this case the width of the pass-band and the form of resonance curve determine the amount of non-linear distortion. In order to compare the two systems, it is enough to compare two of the most common coupling networks: single-tuned circuits and critically coupled double-tuned transformers. Such a comparison has been made by Gonorovskiy (ref.1 "Radiosignals and transients in radio networks" Svyaz'izdat, 1954), who has shown that double-tuned transformers are preferred in FM when a small amount of distortion is required (third harmonic distortion only). The author of the present article extends the treatment as given in (1), which he does not find to be conclusive and makes a few corrections to the results given by Manayev (ref.2:

Choice of interstage coupling in FM receivers. (Cont.)[267]

Bandwidth in FM reception necessary to avoid non-linear distortions, Radiotekhnika, No.5, 1948). The third harmonic distortion only is considered and mathematical treatment of the expression for it, as given in (1), permits a graphical comparison of this distortion as introduced by the single circuits and double-tuned transformers. Further mathematical treatment permits the evaluation of it for n cascaded stages, for which the coefficient of distortion is transformed into the form

$$K_{3n} = K_3 Z_n$$

where K_3 is the distortion of one stage only and Z_n is a function determining changes in K_3 with increasing number of stages. A table of the values of Z_n is given for n = 1, 2, 3, 4 and 8. Two other tables give the selectivity and respective noise bandwidths of n-stage amplifier with the modulation index m = 5, frequency deviation f_d = 75 kc/s and K_3 = 0.5% for single circuits and double-tuned transformers. The author concludes that, if the adjacent channel interference can be neglected, i.e. in the case of low-sensitivity receivers with 2 or 3 stages of IF amplification - double tuned band-pass transformers are preferred. In the case of high-sensitivity fringe-area receivers

KANTOR, L. Ya.

RECEPTION

"UHF FM Receiver with Frequency Feedback," by Engineer L. Ya. Kantor, Vestnik Svyazi, No 6, June 1957, pp 12-15.

Further detailed description of a receiver used for a wired-broadcast reception unit, in which frequency feedback is used to reduce the nonlinear distortion and increase the selectivity. A complete diagram and coil-winding data are given.

Card 1/1

PA - 2017

AUTHOR: KANTOR, L. Ya.

TITLE: Frequency Back-Coupling in Signal Receivers with Frequency Modulation. (Obratnaja svjaz po častote v priemnikah signalov s častotnoj modulaciej. Russian)

PERIODOCAL: Radiotekhnika, 1957, Vol 12, Nr 1, pp 58-62 (U.S.S.R.)

Received: 2 / 1957 Reviewed: 3 / 1957

ABSTRACT: The skeleton scheme of a receiver with frequency modulation and frequency back-coupling is shown. For the case of a negative connection the frequency modulation of the local oscillator coincides as regards phase with the frequency modulation of the signal. From the equation set up for the voltage at the output of the frequency detector it can be seen that frequency back-coupling diminishes the influence exercised by the amplitude modulation of the signal upon output voltage. The introduction of frequency back-coupling also leads to a reduction of the voltage at the output of the frequency modulation of the signal. However, the same formula also shows that the depth of back-coupling is proportional to the amplitude of the input signal. In the case of a large signal the amplitude reserve of stability is exceeded, which leads to self-excitation. Therefore, the limiter must be conserved. This must be done also because the reduction of the linear range of the frequency detector necessary for the purpose of suppressing the modulation amplitude leads to a deterioration of the selectibility in the adjoining channel. Frequency back-coupling causes a considerable reduction of nonlinear distortions in the amplifier of the intermediate frequency as well as in the frequency detector. Besides, it must be taken into account that the signal has a reduced frequency deviation

CARD 1 / 2

AUTHOR: Kantor, L. Ya., Regular member of the Society. 108-9-7/11

TITLE: On the Reduction of Nonlinear Distortions by Feeding Back (Ob umen'shenii nelineynykh iskazheniy obratnoy svyaz'yu).

PERIODICAL: Radiotekhnika, 1957, Vol. 12, Nr 9, pp. 55-62 (USSR)

ABSTRACT: It is shown that the nonlinear distortions of amplifier with feeding back can at high frequencies only be judged by the difference tone coefficient. Formulae for the computation of this coefficient are given. Methods for the increase of efficiency of feeding back at highest frequencies are suggested. By means of a dependent scheme the definition of a system with a "nonlinearity dependent on the frequency" is given and the different distortion characteristic values for such systems compared with each other. There are 6 figures, 1 table, and 4 Slavic references.

ASSOCIATION: Nauchno-tekhnicheskoye obshchestvo radiotekhniki i elektrosvyazi im. A. S. Popova.

Card 1/1

Mikhoil, Boris, inzh.

Apparatus for measuring nonlinear distortions. Vest. sviazi 17 no.12: 8-10 D '57. (MIRA 10:12)

(Electric meters)

KANTOR, L. Ya. Cand Tech Sci -- (diss) "Frequency feedback in the frequency-modulation receivers of relay-broadcasting units." Mos, 1958. 12 pp (Mos Electrical-Engineering Inst of Communications), 150 copies. Bibliography at end of text. (KL, 11-58, 117)

KANTOR, L. Ya.

SOV/106-58-12-12/13

AUTHORS: L. Kantor; (V. Khatskelevich and L. Shur)

TITLE: Letters to the Editor (Pis'ma v redaktsiyu)

PERIODICAL: Elektrosvyaz', 1958, Nr 12, pp 74-75 (USSR)

ABSTRACT: In the first letter, Kantor criticizes the article by Khatskelevich and Shur, "Compensation of Non-Linear Distortions by Envelope Negative Feedback in Radio-Transmitting Apparatus", Elektrosvyaz', 1958, Nr 4, and the second letter gives the authors' reply. Kantor states that the harmonic coefficient, as used by the authors, is only one criterion, the simplest but not the best. It introduces errors particularly at the higher frequencies. These errors do not occur when the difference-tone method (as described by Kantor in Ref 1) is used. The second letter states that the concept of a "coefficient of non-linear distortions" (harmonic coefficient), to the first approximation, correctly describes the fundamental phenomena. This coefficient can be measured easily with existing measuring apparatus. The authors concede that the difference-tone method is useful and accurate in some cases,

Card 1/2

particularly for amplifying equipment, but it is not suitable for transmitting equipment containing non-linear elements. They do not agree that the harmonic coefficient method introduces errors at the higher frequencies.
There are 2 references, one of which is Soviet, and one British.

SOV/111-59-1-29/35

AUTHORS: Kantor, L.Ya., Krutsko, G.P., Senior Engineers

TITLE: An Experiment in Introducing FM Reception of Frequency Modulation Stations into Rediffusion Stations of the Moscow Oblast' (Opyt vnedreniya priyoma UKV ChM stantsiy na radiouzlakh Moskovskoy oblasti)

PERIODICAL: Vestnik svyazi, 1959, Nr 1, pp 34 - 36 (USSR)

ABSTRACT: The authors stress the convenience of additional radio programs transmitted from FM stations. FM reception experiments in the Moscow Oblast' are evaluated. At present the Khar'kovskiye masterskiye UPP Ministerstva svyazi SSSR (Khar'kov work-shops of the UPP of the USSR Communications Ministry) are producing FM adapter parts for radio receivers. A sufficient amount of PTS-47 receivers was set free by the recent introduction of new TPS-54 receivers in the rediffusion stations. The remodeled PTS-47 receiver has 4 tubes, a sensitivity of 30 mv, an adjacent-channel sensitivity of 34 db, an image-channel sensitivity of 30 db, an amplitude modulation suppression of 30 db, the coefficient of the nonlinear distortion is not above 2.5% in the 100 to 10,000

Card 1/3

cycle band, and an AFC of up to 46 db. The noise interference during reception was traced to engines of the old models of ZIS-5 and GAZ-AA automobiles and ST-35 telegraphic apparatus. About 60 rediffusion stations in the Moscow Oblast' have taken up experimental FM service. A distance of 70 to 80 km from Moscow is adequately covered. Reception in Zagorsk and Narofominsk was not free from interference. Retransmission stations on the sector Drezna - Orekhovo - Zuyevo yielded additional 10 to 20 km depending on the antenna construction and local amounts of interferences. The author concludes that introduction of an FM program would be desirable, but two major obstacles have to be first overcome: the relatively high cost of the new receivers and the adverse feeling of many rediffusion station workers towards the new idea which requires a special psychological readiness

SOV/111-59-1-29/35

An Experiment of Introducing FM Reception of Frequency Modulation Stations Into Rediffusion Stations of the Moscow Oblast'

for the "old hands". There are 2 sets of diagrams and 1 block diagram.

ASSOCIATION: Proizvodstvennaya laboratoriya DRTS Moskovskoy oblasti (The Industrial Laboratory of the DRTS of the Moskva Oblast')

Card 3/3

6(4) SOV/111-59-8-10/30

AUTHOR: Kantor, L.Ya., Candidate of Technical Sciences,

TITLE: A VHF FM Receiver for the Radio Broadcasting Center

PERIODICAL: Vestnik svyazi, 1959, Nr 8, pp 9-10 (USSR)

ABSTRACT: The article discusses the requirements for a VHF FM receiver for use in broadcasting centers, and describes a circuit developed at the Proizvodstvennaya laboratoriya moskovskoy oblastnoy DRTS (Production Laboratory of the Moscow Oblast DRTS) (IRPA) which meets the specific requirements. The author first deals at some length with a number of the circuit specifications and problems connected therewith: distortion, sensitivity, selectivity; choice of circuits: the local oscillator, limiter-discriminator, automatic frequency control (AFC) the use of a local oscillator feedback circuit (OSCh) for additional AFC control, and the use of single tuned circuits instead of band-pass filters in inter-stage coupling. The circuit developed on the basis of these considerations, and built around the now discontinued PTS-47

Card 1/3

receiver (replaced by the TPS-54), is then described and the circuit diagram presented. The tube line-up is as follows: RF amp-mixer-6N3P, local osc-6N3P, I. F. amp (4cm) - 6Zh3 (2), limiter-6Zh4, discriminator-6Kh6, and 1st audio amp - 6Zh7. A control point is indicated for connection of a DC voltmeter (type VLU, AVO-5, Ts-20) for tuning adjustments or antenna orientation. The following specifications are given: sensitivity - 10-30 mv, distortion - 2.5% maximum at 50-10,000 cps, AM on carrier frequency - 30-40 db down, adjacent channel selectivity figure - 34 db, image ratio figure - 30 db, local oscillator voltage on the antenna terminals does no exceed 1.5 mv, hold-in range - ± 1.5 mc, locking range - about ± 250 kc, drift (AFC off) for line voltage variations of ± 10% - no more than 70 kc, warm-up drift - 130 kc. The author states that the given parameters allow the receiver to be used at unmanned stations. Similar receivers are already installed at 60 radio broad-

A VHF FM Receiver for the Radio Broadcasting Center

casting centers in Moscow provinces, and have been found reliable in operation. There is 1 schematic diagram.

Card 3/3

68058

SOV/106-59-10-5/11

6.4800,6.4400

AUTHOR: Kantor, L. Ya

TITLE: The Interference-Stability of a F.M. Receiver with Frequency Negative Feedback

PERIODICAL: Elektrosvyaz', 1959, Nr 10, pp 38-42 (USSR)

ABSTRACT: The Author considers the factors influencing the interference-stability of a f.m. receiver with frequency negative feedback (FNF) and compares his conclusions with those published previously by Ageyev, Vinitskiy and others. Ageyev (Ref 1) has shown that in a f.m. receiver with resonant frequency control (RFC) the equivalent resonance curve of the controlled circuit is widened until, when the control coefficient equals unity, the curve becomes infinitely wide. Any gain in interference-stability can only be achieved by the frequency-sensitive circuit making the value of the control coefficient different from unity within the limits of the useful modulation frequencies and in this way reducing the passband of the receiver. Hence, reception of a f.m. wave with a given distortion is obtained by passing at each instant only part of the whole spectrum - the active band - through the filter.

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The Interference-Stability of a F.M. Receiver with Frequency Negative Feedback

It is shown that the frequency negative feedback (FNF) system, proposed by Chaffee (Ref 2) also reduces the active passband. The gain in selectivity in a receiver with FNF is, in fact, determined by the i.f. amplifier. Inequality of the frequency characteristic of the RFC with modulation frequency is reduced $(1 + \beta k)$ times and the equivalent resonance curve is correspondingly widened. In this respect, the two systems are similar, but there are differences. In the case of the RFC system with unrestricted bandwidth, the input voltage to the detector does not change, whereas in a receiver with FNF, both the output and the controlling voltage are error signals, which depend directly on the depth of feedback. When $(\beta k) \to \infty$, the frequency deviation in RFC tends to zero. Therefore, in a FNF system exact following is not realised and there is incomplete control. If a sinusoidal interference, acting at the receiver input, sets up a frequency deviation of a frequency-modulated signal in the limits of the working band, then the feedback does not change the signal-to-noise ratio at the receiver output. If the modulation

The Interference-Stability of a F.M. Receiver with Frequency Negative Feedback

frequency of the interference lies outside the limits of the working band, then at the output of a RFC system the ratio of the frequency deviation due to the interference and due to the desired signal increases because the FNF widens the resonance curve. But in so far as the feedback depth is limited, not only because of reduction in the output voltage of the receiver but also because of stability considerations, the loss is also limited. Thus, the effective reduction of non-linear distortions by frequency feedback makes a reduction in the passband and a gain in selectivity possible, and this gain exceeds the loss. The appearance at the output of the detector of audible interference is due to a non-ideal detector. With an unmodulated signal and interference, a constant component appears at the output of a non-ideal detector as well as an oscillation with a frequency F_{nom}. With modulation of the interference, the value of this component changes, causing audible interference. For simplicity, the interference is evaluated simply by the value of the d.c. component.

The Interference-Stability of a F.M. Receiver with Frequency Negative Feedback

Then, in so far as the constant component is a product of the non-linear distortion arising in the receiver itself, it can be reduced by feedback. In a receiver with FNF, the modulation of the signal by interference in the adjacent channel is reduced in accordance with the narrowing of the resonance curve by the RFC itself, but with FNF, the d.c. component is reduced $(1 + \beta_o)$ times. In the absence of, or with small interference, the useful signal at the output of the receiver is also reduced $(1 + \beta_o)$ times by the FNF and thus the signal-to-noise ratio at the receiver output remains the same as for a wide-band receiver without FNF, although the interference at the input has increased. The gain in suppression of AM which is possible in a receiver with FNF (Ref 3) is related to a reduction in the band of the detector and leads to loss in selectivity.

V. M. Sidorov advised in this work. There are 4 figures, and 9 references, 5 of which are Soviet, 2 English and 2 German.

SUBMITTED: April 4, 1958

Card 4/4

KANTOR, Lev Yakovlevich; NOVIKOVA, Ye.S., red.; SHEFER, G.I., tekhn.red.

[Experience in using shortwave FM reception at wire broadcasting stations in Moscow Province] Opyt vnedreniia UKV ChM priema na radiouzlakh Moskovskoi oblasti. Moskva, Gos.izd-vo lit-ry po voprosam sviazi i radio, 1960. 31 p. (MIRA 14:1)
(Moscow Province--Wire broadcasting)

KAMFOR, L.Ya.; GUMELYA, A.N.; ROZENBERG, Ya.G.; AFANAS'YEV, A.P.; SAMORUKOV, D.A.; GUSEV, S.S.; DOGADIN, V.N.; RAMENSKIY, B.N.; PIOTTKOVSKIY, B.A.; SVERDLOVA, I.S., red.; KARABILOVA, S.F., tekhn. red.

[Electric communications and wire broadcasting] Elektricheskaia sviaz' i radiofikatsiia. Moskva, Gos. izd-vo lit-ry po voprosam sviazi i radio, 1961. 607 p. (MIRA 14:5)
(Telephone) (Wire broadcasting)

28044
S/106/61/000/009/002/008
A055/A127

6.4000 (1159,1331)

AUTHOR: Kantor, L. Ya.

TITLE: Method of reducing cross-talk in broadcasting and communication channels

PERIODICAL: Elektrosvyaz', no. 9, 1961, 8 - 14

TEXT: In multichannel communication systems with frequency division, interferences between channels can be reduced by using the controlled carrier modulation ("s peremennym urovnem nesushchey"). The author uses this modulation method and shows its efficiency as regards cross talk suppression. The AM modulated signal with a slowly varying carrier U_0 (t) can be expressed as:

$$u = U_0(t)\left[1 + c\frac{U_\Omega}{U_0(t)}\cos\Omega t\right]\cos\omega t, \qquad (1)$$

When U_{delay} (Figure 1) is equal to zero (the present analysis is limited to this case), we have:

Method of reducing cross talk ....

$$U_0(t) = U_{0\ max} - K\ (U_{\Omega max} - U_\Omega). \qquad (4)$$

In (1) and (4), U_Ω is the modulating voltage amplitude, $U_{0\ max}$ and $U_{\Omega\ max}$ are the amplitude of the carrier and of the modulating signal at maximum modulation, respectively; k and c are proportionality coefficients.

4f

$$\text{When } U_\Omega = 0, \quad U_0(t) = U_{0\ min} = U_{0\ max} - K\ U_{\Omega\ max}; \qquad (4')$$

where

$$K = \frac{U_{0\ max} - U_{0\ min}}{U_{\Omega\ max}}. \qquad (5)$$

Using (5), formula (4) can be written as follows:

$$\frac{U_0(t)}{U_{0\ max}} = p + \rho - p\rho, \qquad (4'')$$

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Method of reducing cross talk ....

where $p(t) = \frac{U_\Omega}{U_{\Omega\,max}}$ and $\rho(t) = \frac{U_{0\,min}}{U_{0\,max}}$.

In the limit case $U_{0\,min} = 0$, $K = \frac{U_{0\,max}}{U_{\Omega\,max}}$ (5')

and $U_0(t) = k\,U_\Omega$. (4'")

In this case , the modulation factor $m = \frac{c}{k}$ is constant at any modulating voltage. Figure 1 shows one of the possible systems of AM modulation with controlled carrier. After mentioning also another system (intended for anode modulation), the author proceeds to the analysis of the cross talk. To the nonlinear element characterized by the cubic equation:

$$u = U_- + au_{inp} + bu_{inp}^3 \quad (6)$$

are applied two AM modulated signals, i.e.:

$$u_{inp} = U_{10}(t)\,[1 + m_1(t)\cos\Omega_1 t]\cos\omega_1 t + U_{20}(t)\,[1+m_2(t)\cos\Omega_2 t]\cos\omega_2 t. \quad (7)$$

Card 3/7

Method of reducing cross talk ....

The interference from the first channel at the output of the receiver of the second channel can be determined by equations(6) and (7). It is:

$$\text{Int} = \frac{3}{2} bU_{10}^2(t)\, m_1 [2\cos\Omega_1 t + \\ + 2\cos\Omega_1 t\, m_2 \cos\Omega_2 t + m_1 \cos^2\Omega_1 t + m_1 \cos^2\Omega_1 t m_2 \cos\Omega_2 t]. \quad (8)$$

A symmetrical expression is obtained forthe interference from the second channel at the output of the receiver of the first channel. Examining the interference in the second channel, the author considers, first, the spacing moment in this channel ($m_2 = 0$), since cross talk is then particularly noticeable. When $m_2 = 0$, the expression (8) is reduced to two terms, and the second of these two terms (representing a much smaller interference) can be neglected. Under these conditions, the ratio between the interference amplitude and the amplitude of the useful signal at maximum modulation signal will be:

$$\frac{\text{Int}}{\text{Sign}} = 3\,\frac{b}{a}\,\frac{U_{10}^2(t)\, U_{20}(t) m_1}{U_{20\ max}\, m_{2\ rat}} \quad (9)$$

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Method of reducing cross talk ....

$m_{2\ rat}$ being the rated modulation factor in the second channel [at $U_{20}(t)=U_{20\ max}$]. It is evident that the passage to the controlled carrier modulation method in the interfering channel (first channel in the now examined case) reduces cross talk. Formula (9) contains:

$$U_{10}^2(t)\ m_1 = U_{10}(t)\ c\ U_{1\Omega}, \qquad (10)$$

and, in the controlled carrier method, U_{10} decreases in comparison with usual AM (for the same value of $U_{1\Omega}$) in accordance with formula (4"). The cross talk decrease, at a certain moment t, [for $U_\Omega = U_\Omega(t)$] will be equal to:

$$\frac{(\text{Int/Sign})_{\text{contr.carrier}}}{(\text{Int/Sign})_{\text{norm.}}} = p(t)\ (1-\rho) + \rho. \qquad (11)$$

The cross talk suppression is, however, much more pronounced when the controlled subcarrier method is used in the second channel itself (i.e., in the channel subjected to cross talk). During the signal intervals in this channel [$U_{20}(t) = U_{20\ min}$], the cross talk, according to formula (9), will be reduced

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Method of reducing cross talk ....

$$\frac{U_{20\ max}}{U_{20\ min}} \qquad (15)$$

times. Only the intervals have been considered until now. When the useful signal is modulated, its carrier grows, and the gain as regards cross talk suppression decreases, becoming equal to zero at maximum modulation. But the masking effect of the useful transmission renders this growth unnoticeable to the ear as has been proved experimentally. The practical use of AM with controlled carrier in h-f broadcasting channels permitted to reduce cross talk in exact agreement with the formulae derived in this article. There are 5 figures and 6 Soviet-bloc references.

SUBMITTED: May 10, 1961.

[Abstracter's note: The following subscripts and symbols are translated in formulae: min stands for мин ; max stands for макс; delay stands for зад ; inp stands for вх ; Int(interference) stands for п ; sign.(signal) stands for с ; rat (rated) stands for н (nominal'nyy); norm (normal) stands for норм .]

Card 6/7

S/019/61/000/010/019/077
A156/A128

6,4000

AUTHOR: Kantor, L.Ya.

TITLE: Method of suppressing cross interferences

PERIODICAL: Byulleten' izobreteniy, no. 10, 1961, 26

TEXT: Class $21a^4$, 14_{01}. No. 138275 (667141/26 of May 19, 1960). Cross interferences in transmission channels or radio broadcasting channels, where the carrier level drops during transmission pauses tens of times, are suppressed by using the method of variable carrier amplitude modulation.

Card 1/1

KANTOR, L. Ya., kand.tekhn.nauk

Multiprogram broadcasting system using wire broadcasting networks with steel wires. Vest. sviazi 21 no.5:3-5 My '61.
(MIRA 14:6)

(Wire broadcasting)

KANTOR, Lev Yakovlevich; KHVATOVA, L.M., otv. red.; NOVIKOV, S.A., red.; SLUTSKIN, A.A., tekhn. red.

[Multiple program broadcasting and wire broadcasting networks]Mnogoprogrammnoe veshchanie po radiotransliatsionnoi seti. Moskva, Sviaz'izdat, 1962. 57 p. (MIRA 15:10)
(Wire broadcasting)

GORON, Isaak Yevseyevich; KANTOR, L.Ya., otv. red.; NOVIKOV, S.A., red.; SHKFER, G.I., tekhn. red.

[Correction of amplitude-frequency distortions] Korrektirovanie amplitudno-chastotnykh iskazhenii. Moskva, Sviaz'-izdat, 1963. 55 p. (MIRA 16:6)
(Wire broadcasting) (Television)

KANTOR, L.Ya.; GUMELYA, A.N.; ROZENBERG, Ya.G.; AFANAS'YEV, A.P.; SAMORUKOV, D.A.; GUSEV, S.S.; DOGADIN, V.N.; RAMENSKIY, B.N.; KARASIK, N.S.; PIONTKOVSKIY, B.A.; Prinimal uchastiye MEDOVAR, A.I.; SVERDLOVA, I.S., red.; ULANOVSKAYA, N.M., red.; MARKOCH, K.G., tekhn. red.

[Electrical communications and wire broadcasting] Elektricheskaia sviaz' i radiofikatsiia. [By] L.IA.Kantor i dr. Izd.2., dop. i ispr. Moskva, Sviaz'izdat, 1963. 672 p. (MIRA 16:8)

(Wire broadcasting) (Telecommunication)

KANTOR, L.Ya., kand.tekhn.nauk

Choice of a level for multiple-program broadcasting. Vest. sviazi 23 no.12:6-7 D '63. (MIRA 17:2)

KANTOR, L.Ya., kand.tekhn.nauk; SHERSHAKOVA, A.V., inzhener; ZASLAVSKIY, S.A., inzh.

Multiprogram group-type receiver for operation in wire broadcasting networks. Vest. sviazi 24 no.2:3-5 F '64. (MIRA 17:4)

KANTOR, L.Ya., kand. tekhn. nauk; KOGAN, V.A., inzh.

New transmitter for three-program wire broadcasting. Vest. sviazi 24 no.10:5-8 O '64. (MIRA 17:12)

KANTOR, L.Ya.

Effect of fluctuation noise on an FM tracking receiver. (MIRA 18:6)
Elektrosviaz' 19 no.4:23-30 Ap '65.

KALASHNIKOV, N.I.; KANTOR, L.Ya.; BYKOV, V.L.

International experiment in radio communication via an artificial satellite of the earth and the moon. Elektrosviaz' 19 no.7:25-30 Jl '65. (MIRA 18:7)

10

L 65295-65 EWT(d)/EWT(l)/FS(v)-3/FSS-2 TT/AST/GW

ACCESSION NR: AP5021255 UR/0293/65/003/004/0618/0629
629.195.2:621.39

AUTHORS: Getmantsev, G. G.; Kalashnikov, N. I.; Erkov, V. I.; Benediktov, Ya. A.; Yerukhimov, L. M.; Belikovich, V. V.; Bakhnin, V. M.; Kantor, I. Ya.; Korabkov, Yu. S.; Kunilov, M. V.; Litvinov, N. A.; Pushkov, I. M.; Rapoport, V. O.; Sigalova, A. G.; Cherepovitskiy, V. A.; Akim, E. A.

TITLE: The results of an experiment on radio communications via "Echo 2" and the moon at a frequency of 162.4 megacycles between the observatories of Jodrell Bank and Zimenki

SOURCE: Kosmicheskiye issledovaniya, v. 3, no. 4, 1965, 618-629

TOPIC TAGS: moon, satellite communication, radio telescope, radio transmission, satellite tracking, scientific research coordination / Jodrell Bank radio telescope, Zimenki observatory radio telescope, BESM 2 electronic computer

ABSTRACT: During February-March 1964 the Academy of Sciences of the SSSR, NASA of the USA, and the General Post Office Department of Great Britain conducted an experiment to establish one-way radio communication at 162.4 megacycles via the passive satellite "Echo-2" and the moon. Echo-2 was used for 34 communication

Card 1/2

L 65295-65

ACCESSION NR: AP5021255

tests of 10-15 minutes (the time interval permitted by Echo's orbit), and the moon was used for 15 test runs between the Echo tests. The transmitting equipment at Jodrell Bank and the receiving unit of the Zimenki Observatory are described in detail. Echo orbit information furnished by NASA, visual observations, and radio tracking data from fixed stations were fed to a BESM-2 electronic calculator which provided programmed tracking control. The received signal exhibited strong fluctuations separable into two periods: 1) a 1-2 minute fluctuation associated with Echo-2 distortion from a sphere and with tracking errors; 2) a 3-10 second period associated with small surface irregularities. The rapid fluctuations varied with each test. Voice signals, slowed by a factor of 8, were barely intelligible. Telegraph, teletype, and photofacsimile transmission, in general, were unsatisfactory, but in periods of high signal-to-noise ratios intelligible messages were received. The moon transmissions were not as clear but did furnish scientific information. Unexpected transmission losses included 3-5 db for polarization losses and 1-2 db for unknown causes. The international cooperation was excellent, with the Soviet submitting a complete report. Offers for further cooperation have been extended. Orig. art. has: 3 tables, 7 figures, and 4 formulas.

ASSOCIATION: none

SUBMITTED: 18Apr65 ENCL: 00 SUB CODE: AA, EC

NO REF SOV: 000 OTHER: 002

Card 2/2 2/6

L 85?1-66 EWT(d)

ACC NR: AP5011567 SOURCE CODE: UR/0106/65/000/004/0023/0030

59

B

AUTHOR: Kantor, L. Ya.

ORG: none

TITLE: Effect of jitter on an FM tracking receiver

SOURCE: Elektrosvyaz', no. 4, 1965, 23-30

TOPIC TAGS: information theory, tracking system, signal interference, FM receiver

ABSTRACT: The author attempts to refine Inlou's theory on noises in a receiver with frequency compression (L. Inlou, "Using Frequency Compression to Reduce the Carrier-to-Noise Threshold in FM Signals", *Trudy instituta radioinzhenerov*, No. 1, 1962). Experiments are conducted to show that there is a noticeable increase in noise and a shift in the threshold point at a frequency compression considerably lower than that given by Inlou as optimum, i. e. under conditions where the frequency compression threshold should come much later than the threshold for the direct channel. Errors are pointed out in several other papers dealing with the theory of FM receivers with frequency compression. Formulas are derived for optimizing the parameters of receivers of this type. A method is proposed for determining the interference threshold of an FM receiver with a tracking filter. The author thanks Yu. Afanas'yev, Ye. Okhtyarkin, V. Bykov and M. Sankina for taking part in preparation and discussion of the

UDC: 621.396.621.33:621.391.822.3

Card 1/2

L 8551-66

ACC NR: AP5011567

article. Orig. art. has: 4 figures, 13 formulas.

SUB CODE: DP,EC/ SUBM DATE: 10Jan64/ ORIG REF: 007/ OTH REF: 004

jw

Card 2/2

L 8955-66 EWT(d)

ACC NR: AP5026497 SOURCE CODE: UR/0286/65/000/019/0027/0027

AUTHORS: Kantor, L. Ya.; Bykov, V. L.

ORG: none

TITLE: Method for decreasing the interference-free threshold of wide-band frequency- and phase-modulated receivers. Class 21, No. 175089

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 19, 1965, 27

TOPIC TAGS: fm receiver, phase modulation, interference reduction

ABSTRACT: This Author Certificate presents a method for decreasing the interference-free threshold of wide-band frequency- and phase-modulated receivers, consisting of a relative increase of the carrier signal level occurring after preliminary conversion of the wide-band signal into a narrow-band signal. To simplify the receiving device, the converted narrow-band signal is fed to two parallel filters (see Fig. 1).

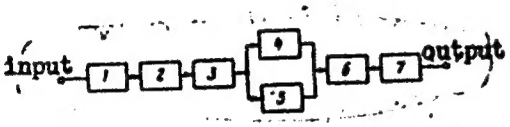

Fig. 1. 1 - Mixer; 2 - intermediate frequency amplifier; 3 - converter; 4 - narrow-band filter; 5 - wide-band filter; 6 - limiter; 7 - frequency attenuator.

UDC: 621.396.62:621.396.669

Card 1/2

L 8955-66

ACC NR: AP5026497

The narrow-band filter passes the carrier and attenuates the side frequencies. The wide-band filter attenuates uniformly the whole spectrum of the narrow-band FM or PM signal. Orig. art. has: 1 diagram.

SUB CODE: 09/ SUBM DATE: 13Mar63

BVK
Card 2/2

L 20971-66 EWT(d)/FSS-2/EWT(1)/EEC(k)-2 AST/TT/GW

ACCESSION NR: AP5018025 UR/0106/65/000/007/0025/0030

621.372.553

19

16

8

AUTHOR: Kalashnikov, N. I.; Kantor, L. Ya.; Bykov, V. L.

TITLE: International experimental radio communication via a satellite and the Moon

SOURCE: Elektrosvyaz', no. 7, 1965, 25-30

TOPIC TAGS: satellite communication

ABSTRACT: During the period 21 Feb - 8 Mar 64, experiments with radio communication between Jodrell Bank Observatory near Manchester, England, and Zimenki Observatory near Gor'kiy, SSSR, via the USA "Echo-2" passive satellite (34 sessions) and via the Moon (10 sessions) were conducted. From Jodrell to Zimenki, cw, 400-cps AM, start-stop telegraph, Morse telegraph, facsimile, and time-stretched speech signals were transmitted. The Jodrell 1-kw 162.4-mc transmitter operated with a parabolic 76-m diameter, 40-db gain 1.8° angle

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